# NATIONAL SCIENCE FOUNDATION OFFICE OF INSPECTOR GENERAL

# Performance Plan 2007 - 2008



#### **INTRODUCTION**

This performance plan is presented in two sections: the Office of Inspector General (OIG) Strategic Plan for 2005-2010, and the OIG Annual Plan for April 1, 2007, through March 31, 2008.

The *OIG Strategic Plan* (p. 2) identifies the OIG's vision, mission, basic values, five-year strategic focus, management challenges for the National Science Foundation (NSF), and core functions. It also includes the *OIG Workforce Plan* (p. 9), which describes the human capital needed to meet the office's strategic goals over the next three years.

The *OIG Annual Plan* (p. 12) describes the goals and strategies we will use to focus our operations over the 12-month period to achieve our strategic objectives, as well as the measures we will use to determine our progress. Our goals include (1) promoting NSF efficiency and effectiveness, (2) safeguarding the integrity of NSF programs and resources, and (3) using OIG resources effectively and efficiently.

The purpose of our performance plan is to identify OIG's broad priorities and direction for the coming years and to guide our specific activities for the current year. We are using the 12-month period from April 1 to March 31 as our performance period in order to tie office-wide performance goals more effectively to individual performance, which NSF requires be rated during that 12-month period. We are committed to integrating this plan into our ongoing management system, assessing its progress on a regular basis, making adjustments as needed, and achieving our goals.

### **OIG Strategic Plan**

#### **VISION**

We will use our diverse and talented staff to assist NSF in improving its programs and meeting the needs of the communities it supports. We will help prevent problems, address existing issues in a timely and proportionate manner, keep abreast of emerging challenges and opportunities, and facilitate positive change.

#### **MISSION**

Under the authority of the Inspector General Act of 1978, as amended, the OIG conducts independent and objective audits, investigations, and other reviews to provide effective oversight of NSF activities. Our specific aims are to promote the efficiency and effectiveness of NSF programs and operations and to safeguard their integrity. We strive to address the concerns of our stakeholders: the National Science Board, the Congress, NSF, the research communities, the Executive Branch, and the American public.

#### **BASIC VALUES**

**Professionalism**. We follow accepted technical and ethics standards of our disciplines; do our work fairly and thoroughly; represent our results accurately, objectively, and with a sense of proportion; and complete our work within a reasonable time so that it is available for relevant decisions.

**Accountability**. We take responsibility for the quality of the work we perform and promote integrity, objectivity, and consistency in all our efforts.

*Flexibility.* We make every effort to anticipate changing information, environmental conditions, and potential opportunities and obstacles; adjust our priorities and work methods as needed; and employ effective communications to increase the positive impact of change.

*Innovation*. We think creatively, adopt new ways of addressing issues tailored to unique circumstances, take reasonable risks in resolving problems, and build on successful processes to make them better.

**Teamwork**. We are respectful of others; seek common ground when differences occur; be honest, trustworthy, and straightforward; and are cooperative without compromising our independence. We engage employees at all levels in developing and continually improving our work methods and products.

#### 5-YEAR STRATEGIC FOCUS

The OIG's strategy focuses primarily on providing independent oversight to ensure the efficiency, effectiveness, and integrity of NSF's business activities. We are not responsible for managing any NSF program operations, nor do we attempt to assess the scientific merit of research funded by the agency. Instead, we concentrate our resources on monitoring agency management functions that may pose significant financial or other risks, investigating allegations of criminal behavior or other misconduct, and recommending corrective actions to NSF management. In determining our priorities, we consider the results of prior audits and consult closely with the National Science Board and the Congress, to both of whom the Inspector General directly reports, and with NSF managers and staff, the Office of Management and Budget, and members of the research communities supported by NSF. Over the five-year period covered by this strategic plan, the OIG has identified the following as areas for priority attention:

- Pre-award assessment of awardees' grant management capability
- Post-award monitoring of awardees' financial and program performance.
- Oversight and management of centers and large facility awards
- Assessment of research results and return on investment
- Awardee and NSF financial accountability and compliance
- Security and adequacy of NSF infrastructure, including personnel, equipment, and information technology resources
- Quality of Single Audits
- NSF employee and awardee integrity
- Misconduct in research

Internal Audits of NSF. Through internal audits of NSF, the OIG will continue to assess five areas that have previously been identified as management challenges to NSF or are federal priorities: (1) Pre-award processes, including merit review, contract procurement, and pre-award evaluation of awardees' capabilities to manage NSF funds; (2) Post-award monitoring of active awards and major projects, including centers and large facilities, such as the U.S. Antarctic Program; (3) Evaluation of scientific research results, including the results of long-term investments in major research and education projects; (4) Safeguarding physical and intangible assets, including sensitive agency information such as personally identifiable information; and (5) Financial accountability as mandated by federal requirements such as the Chief Financial Officers Act and the Federal Managers Financial Integrity Act.

External Audits. The increasing number, size and complexity of NSF's award portfolio poses a higher risk that NSF may make improper and erroneous payments or that awardee institutions may not comply with applicable federal and NSF financial and administrative requirements. Consequently, OIG expects to continue allocating a significant portion of resources to audits of selected high-risk awardees to evaluate their financial accountability and underlying internal controls to ensure compliance with federal requirements and the terms and conditions of their NSF awards. OIG will continue to use its own audit staff, independent public accounting firms and other Federal agencies under contract with OIG to conduct audits of these higher risk programs and institutions. OIG also expects to continue to conduct audits

of NSF awards supporting international projects as NSF expands its involvement in international collaborations and activities.

Evaluation of OMB Circular A-133 Audits. NSF's substantial reliance on CPA audits performed under the Single Audit Act requires closer OIG oversight of their quality, including the establishment of an ongoing quality control review program. Audits performed under the Single Audit Act are intended to provide federal agencies with assurance that their awardees are properly accounting for and managing federal grant funds. Recent reviews by a number of OIGs, including the NSF OIG, have raised concerns regarding the quality of these audits. Accordingly, the OIG has participated with other OIGs in a Government-wide project to evaluate their overall quality and their effectiveness as a means to ensure awardee accountability and compliance. OIG will continue to support government wide actions to address the audit quality deficiencies identified by the project.

*Investigations.* We will continue to react effectively and in a timely manner to allegations of fraudulent practices, and over the next few years we will focus greater effort on proactive prevention and detection of grant fraud. This will include expanding our outreach to ensure that NSF staff and awardees understand the rules and regulations that apply to them. It also includes efforts to determine if violations identified during individual investigations are widespread, whether they undermine the integrity of the data upon which NSF relies, and evaluating indicators of grant fraud that may be found during audits and other reviews. We will conduct a proactive, interdisciplinary assessment of complex audit findings that may indicate fraud or other potential violations that may go undetected. Investigators could be expected to initiate more cases resulting from grant fraud and compliance review programs, as well as from proactive SBIR fraud reviews. We will continue to identify opportunities to assist awardee institutions, other government agencies, and other IG offices in deterring misconduct, fraud, and other violations. Within the federal IG community, we will continue to play a leadership role in establishing more effective coordination of grant fraud prevention and detection. Further, we will continue to play a leadership role in the area of research misconduct. While continuing to serve as a leader in education, prevention, and detection efforts in this area, we will expand our efforts as the global impact of research misconduct is more fully understood and acknowledged. Finally, we will work among all federal investigative agencies and in developing, testing, and implementing a peer review process for investigations units in ECIE IG offices.

Administration. OIG will continue to develop and refine the OIG Knowledge Management System, which is tailored to the specific needs of our investigative, audit, and management staff. We also seek to establish a more integrated performance management system within OIG, with a more effective coupling of our annual OIG performance plan with the individual performance appraisal process. These initiatives will serve to enhance the productivity and effectiveness of OIG staff.

Management Challenges. To a significant extent, OIG's priorities are governed by its annual list of the most serious management and performance challenges facing NSF. In many cases, these difficult challenges will extend over at least the next several years, and they largely reflect the results of our past work, the priorities enunciated for the federal government by the Congress and the Administration, and our staff's knowledge of agency operations. The current management challenges include:

- Award and contract administration, including post award administration, management of large infrastructure projects, contract monitoring, and promotion of research integrity.
- Human Capital, including workforce planning and administrative infrastructure.
- Budget, Cost and Performance Integration, including performance reporting and the provision of information about the costs of NSF operations
- Information Technology (Enterprise Architecture)
- The United States Antarctic Program, including long-term planning for NSF facilities in the Antarctic.
- Merit Review, and in particular, implementation of the criterion for broadening participation.

#### **CORE FUNCTIONS**

In keeping with our statutory mission, we perform an oversight role and do not engage in program operating functions. Broadly speaking, our work may be divided into two functional areas: (1) *audits and reviews*, which provide information about how well systems function, determine whether activities comply with financial and compliance standards, and identify ways systems can be improved; (2) *investigations*, which address allegations of serious civil, criminal, or research misconduct; and (3) *education and outreach*, which provides a valuable means of establishing and maintaining effective communications between OIG, NSF, and the research communities, which is essential in facilitating our mission of promoting the efficiency and effectiveness of NSF programs and operations and safeguarding their integrity. In each area, we strive to focus on substantive matters, to demonstrate our commitment to perform our duties fairly and to work cooperatively without compromising our independence.

Certain issues require interdisciplinary coordination across these two functional areas. An example is information technology security: we aim to develop a coherent approach to computer security so that we can investigate possible security breaches, audit the capacity of NSF computer systems to withstand attempted intrusions, and develop preventive measures to meet the security needs of both NSF and OIG. Such an approach is likely to involve teams composed of auditors, investigators, attorneys, and/or outside experts in information technology and related fields. This is one of several areas in which we believe interdisciplinary collaboration holds great promise for advancing our mission. Others include involving auditors at early stages of investigations into alleged financial improprieties, creating teams of auditors and investigators to work on compliance issues, and bringing together scientists and auditors for performance reviews.

#### **Audits and Reviews**

Most audits and reviews focus on the efficiency and effectiveness of NSF's programs and operations, as well as those of award recipients. We conduct financial and compliance audits, which primarily determine whether costs claimed by awardees are allowable, reasonable, and properly allocated and whether the awardees' internal control systems are adequate for monitoring their NSF awards. We are also responsible for performing an annual audit of NSF's financial statements, including an evaluation of agency internal controls and data processing systems. We expect to

continue to devote increased attention to performance issues that go beyond financial compliance.

We focus our audits and reviews on issues of substantial concern and prospective importance to NSF and its goals. We select and design projects based on assessments of the risk involved in the activity to be reviewed and the likelihood that an audit or review would lead to improvements.

#### Focusing on Substantive Matters

- We consider program, management, and financial risks.
- We conduct our reviews in accordance with government standards and in ways that assist NSF in pursuing its mission.
- We develop and explain our recommendations in terms of how they will improve NSF effectiveness and efficiency.
- We establish priorities for our work by selecting reviews that promise the greatest substantive benefit for NSF.

#### **Conducting Reviews Fairly**

- After we collect and analyze our data, we solicit feedback from the affected parties and give full consideration to their views.
- To ensure that our reports are thorough, fair, and accurate, we follow accepted quality control practices in the IG community and comply with all relevant federal and professional standards.

#### Working Cooperatively without Compromising our Independence

- We keep affected parties informed, invite them to identify issues of special concern, and endeavor to address the issues they identify.
- We seek to develop analyses and recommendations that enable NSF management and awardees to make improvements.
- We work with NSF managers and awardees to familiarize them with federal requirements and explore ways they can comply without undue burden.

#### **Investigations**

We are responsible for investigating possible wrongdoing involving organizations or individuals who submit proposals to, receive awards from, conduct business with, or work for NSF. We seek to perform focused, well-documented investigations addressing evidence of serious wrongdoing. When appropriate, the results of these investigations are referred to the Department of Justice or other prosecutorial authorities for criminal prosecution or civil litigation, or to NSF for administrative resolution.

Investigating allegations of research misconduct, specifically falsification of data, fabrication of data, and plagiarism, is among our most important responsibilities. Misconduct in research and education strikes at the core integrity of NSF's mission and compromises the research enterprise on an increasingly global scale. It is therefore a special concern for our office.

#### Focusing on Substantive Matters

- We concentrate our investigative resources on the most serious cases, as measured by such factors as the amount of money involved, the seriousness of the alleged ethical violations, and the strength of the evidence.
- We give highest priority to cases that will directly affect future NSF activities, including cases that involve protecting the integrity of federal funds and decision processes, allegations of wrongdoing by NSF staff, and allegations that concern ongoing awards.
- We give priority to cases that will create significant issues for NSF management if they remain unresolved.
- Our research misconduct cases focus on serious violations of the ethical standards that are important to the scientific community.

#### **Handling Cases Fairly**

- Our investigative process includes internal review by staff who have not yet formed an opinion in the case and who bring different disciplinary perspectives to bear on it. Our reviews ensure that matters are kept in proportion and that similar matters are treated consistently.
- We make every effort to collect relevant information in a manner that minimizes the burden on the providers while also allowing a thorough analysis of the facts.
- We protect the privacy of investigative subjects by seeking information directly from them. We conduct our investigations discreetly to avoid inadvertent damage to reputations.
- We value timeliness and recognize that delay can undermine fairness. We give priority to resolving cases in which we have already contacted the subject of the investigation.
- We review past cases in determining how to handle new cases, allowing us to discipline our use of discretion and foster consistency without sacrificing flexibility.

#### Working cooperatively without compromising our independence

- When handling allegations of research misconduct, we seek to accommodate variations in the investigative procedures at awardee institutions. We require that awardees follow fair and reasonable procedures consistent with NSF regulations.
- We work with awardee institutions to ensure that their investigations meet NSF's needs by articulating our concerns at the outset and offering assistance throughout an investigation. We provide advice to help the institutions meet their needs as well as ours.
- We explain our practices and procedures to all affected parties, and when we cannot share substantive information, we explain why.
- We coordinate our work closely with Department of Justice attorneys, law enforcement officers, research university administrators, and officials at other agencies and institutions.
- Based on our experience with research misconduct, we play a leadership role among federal agencies.

#### **Education and Outreach**

An effective education and outreach program is essential to the successful performance of our mission of preventing and detecting problems. Our outreach program also plays a key role in reinforcing NSF's support for the integrity of and compliance with its rules, policies and procedures.

Outreach activities within NSF, such as our liaison efforts with the directorates, make us more accessible to managers and staff and increase the chance that we will hear about important issues. These activities also help educate NSF employees about their obligations to report alleged research misconduct and other issues of fraud, waste, and abuse. Through external outreach to the communities NSF supports, we help NSF foster the responsible use of government funds and integrity in government-supported research programs. We also communicate that our work focuses on matters of substantial concern to NSF and is done with sensitivity to the perspectives and practices of our funded community.

Outreach activities are also a valuable learning tool for OIG staff, as they help familiarize us with NSF and its people, further our understanding of agency operations and the communities it serves, and keep us abreast of changing conditions. They also build trust in our ability to handle sensitive matters with tact, fairness, thoroughness, and a sense of proportion. Such trust is essential for our office to sustain high quality audits, reviews, and investigations.

#### **Office-wide Functions**

In addition to conducting audits and investigations, we pay special attention to staffing and operations. These practices support our core functions. To perform those functions well, we need a capable staff, sound policies and procedures, in-depth knowledge of NSF and the communities it serves, and a coordinated education and outreach effort.

<u>Staffing and Operations</u>. We are committed to developing the skills of our staff through formal training, challenging work assignments, and a work environment that encourages teamwork, diversity, open communication, and learning. Through collaboration among staff members in the various disciplines represented in OIG, we help our staff develop a broader appreciation of the different aspects of effective performance in NSF-funded activities.

We will continue to improve our management information systems and technologies to create a more productive and satisfying work environment, in which work is planned better and executed in accordance with office-wide priorities. Our individual performance plans will continue to be tied closely to the OIG annual plans, we will work with NSF to continue to improve human resource support, and we will manage our training resources effectively.

#### **OIG WORKFORCE PLAN**

Overview. The NSF Office of Inspector General workforce plan serves as a guide for identifying human capital needs, developing and implementing solutions, and evaluating progress toward achieving OIG's strategic goals over the next three years. The plan represents our best estimate of how our current workforce will be adjusted in response to future challenges. OIG will update this plan each year in conjunction with its annual performance plan.

As NSF's budget increases in accordance with the American Competitiveness Initiative, we expect that OIG's workload and workforce will also grow in order to provide necessary oversight of program operations and address the increased exposure of federal funds. Our current strategic plan describes 10 program areas on which we expect to focus attention over the next few years, including agency management of large programs and facilities, procurement, and misconduct in research. In the past, OIG has pursued a number of initiatives that have changed the way we work in order to maximize productivity of our staff. Many of these initiatives are listed in our performance plan. For example:

- OIG has invested in a knowledge management system (KMS) that has enabled us to be more efficient in scheduling, performing, and reporting on our work.
- We expect to continue to increase our use of contractors to perform external audits and provide technical support in complex investigations.
- Our audit and investigative staffs have made significant strides in improving our targeting of high risk situations.

OIG currently has 68 staff: 36 work in the audit division, 21 in investigations, and 11 in administration. We believe that the current staffing balance is appropriate for OIG's foreseeable needs, with adjustments noted below in the event of additional funding, and no significant change in the composition of the workforce is expected. To develop our plan, we determined how many members of our staff are approaching retirement and found that 19 OIG employees, representing almost 30 percent of the workforce, will be eligible to retire within the next five years. Approximately 20 percent of the staff are already eligible or will become so within the next two years. Many of these positions are concentrated at the senior level, indicating an increased need in coming years to engage in succession planning. During the past four years, the turnover rate within OIG has averaged approximately 10 percent per year. If this rate continues, it will allow us some flexibility in adjusting our workforce to meet changing needs and priorities, but any significant changes in workforce emphasis or skill-sets would be possible only with additional funding.

Audits. Our audits will focus primarily on five areas that we believe pose the greatest challenge to the agency: (1) award oversight and monitoring, including the management of large infrastructure projects and NSF's execution and refinement of a risk-based program for monitoring its 35,000 active awards; (2) NSF processes for safeguarding information assets, particularly personally identifiable information, as directed by OMB; (3) meeting the new government-wide requirements to identify, test, and report on financial reporting controls under the Federal Managers Financial Integrity Act; (4) NSF oversight of the scientific performance of its research and assessment of the results of its long-term investments in major research programs;

and (5) specific program issues, such as the management of the U.S. Antarctic Program and the transparency of NSF's merit review process.

OIG is allocating more resources to conduct audits of NSF's financial statements and information security systems, in accordance with the requirements promulgated by the Government Management Reform Act and the Federal Information Security Management Act. Accelerated financial statement reporting deadlines, everincreasing audit requirements, and heightened attention to information-security controls will compel us to expand our efforts in these critical areas. This past year we reallocated from existing resources one additional auditor position to support OIG management of the annual financial statement audits, and over the next two years we expect the contract cost to increase by about ten percent. More audits of NSF's information technology program are also planned, requiring OIG to add an auditor with systems auditing experience within the next two years if funding permits.

The growing size and complexity of NSF's awards have increased NSF's exposure to fraud, waste and mismanagement and will require more active oversight on the part of OIG. Consequently, we plan to increase our audits of selected high-risk awardees using our own audit staff, as well as CPA firms under contract with OIG. Expenditures for contract audits are expected to increase by approximately 20 percent in FY 2007. As our use of contracted auditors increases, more experienced OIG auditors will be needed to oversee their work and ensure it meets our standards. The market for experienced auditors has become substantially more competitive in recent years, requiring us to explore new approaches to recruiting and retaining qualified staff. With regard to performance audits, OIG will seek entry-level auditors and management analysts to train in program evaluation. If NSF's budget increases as expected and OIG receives a proportionate increase in funding, we will add one more auditor to each of these two audit units.

Investigations. Our investigative cases continue to become more complex, requiring increased interaction with NSF, institutional administrators, international organizations, and the Department of Justice in order to bring about effective resolutions. In addition, NSF OIG serves as the focal point for investigating allegations of research misconduct and has experienced a 300 percent increase in both allegations and substantive investigations over the past decade. We will need to recruit at least one additional investigator in order to handle the workload created by the more-intricate civil/criminal cases and the growing number of research misconduct cases.

In recent years, an important component of the resolution of a growing number of our institutional cases has been a compliance agreement. This is a compact between the institution, NSF management, and OIG that requires the institution to implement a set of specific management controls to ensure that federal regulations on the handling of grant funds are fully observed. Such agreements require follow-up by OIG to ensure that the actions to which an institution has committed have in fact been performed. Investigations will need to continue to recruit staff with exceptional legal, administrative, and communications skills to conduct this monitoring. The increase in both reporting and report-monitoring responsibilities for the investigations unit over the next two years will also require the creation of an executive officer position to manage these activities.

Over the next few years we will continue to focus greater effort on proactive reviews that result in the detection of grant fraud and the deterrence of fraudulent behavior. Based on our recent investigative experience, we have initiated proactive reviews that

have been remarkably successful in detecting fraud and mismanagement through better targeting of high-risk institutions and activities. These efforts require increasing use of forensic financial and computer skills to develop investigative leads and evidence. Prevention activities also include expanding our outreach to ensure that NSF staff and awardees understand the rules and regulations that apply to them. As NSF programs have increased in funding, complexity, and number, OIG has seen a commensurate increase in requests for information from universities and research institutions. No immediate new positions are anticipated, but over the longer term, additional staffing may become necessary to ensure that institutional staff and researchers are fully informed of applicable regulations and policies.

Administration. The office's administrative staff has undertaken several large projects over the past five years that have fundamentally changed the way our employees work. OIG's development of a KMS system and a performance planning process have informed the efforts of OIG staff, increased management and operational efficiency, and given staff more explicit direction. OIG will continue to expand and refine the KMS, which has been customized to meet the requirements of our investigative, audit, and management staff. We are also working to establish an integrated performance management system within OIG, with a more effective coupling of our annual OIG performance plan with the individual performance appraisal process. No increases in our administrative staff are contemplated at this time.

Summary. If the OIG budget remains flat over the next few years, we will be able to implement only those actions that have a minimal effect on personnel costs, such as succession planning, and we will modify our recruiting practices to reflect the need for entry-level program performance auditors and more-experienced auditors to monitor contractors. If the budgets for FY 2008 and beyond provide adequate funding, we plan to add three additional auditors to perform IT, contracts, and performance audits; one or two investigative staff with legal, administrative, and communications skills to oversee compliance agreements with institutions; and an executive officer for the investigations division.

### **OIG Annual Plan**

April 2007 - March 2008

#### **OIG GOALS**

We have three goals that provide the framework for our performance plan:

#### 1. Promote NSF efficiency and effectiveness.

a. Increasing OIG impact on NSF's effectiveness and efficiency.

#### 2. Safeguard the integrity of NSF programs and resources.

- a. Enhancing our ability to detect and address improper, inappropriate, or illegal activities.
- b. Balancing reactive approaches (investigations) and proactive approaches (outreach, audits, and reviews) to achieve maximum preventive effect.

#### 3. Utilize OIG resources effectively and efficiently.

- a. Continuing to strengthen our management and planning tools and techniques.
- b. Fully developing, planning for, and utilizing OIG personnel.
- c. Ensuring that managers and staff have the tools and resources necessary to accomplish their duties and responsibilities.
- d. Initiating and participating in collaborative efforts with other organizations that have shared interests.
- e. Promoting effective internal and external communications.

Our success is directly related to how well NSF accomplishes its programmatic responsibilities. Consequently, we will ensure that our work focuses on priority agency issues and that we provide useful, timely feedback to agency managers, the National Science Board (NSB), and the Congress. This plan covers the period from April 1, 2007, through March 31, 2008.

# Goal 1 Promote NSF Efficiency and Effectiveness

Increase OIG Impact on NSF's Effectiveness and Efficiency

In recent years, we have identified a wide range of issues concerning NSF management and operations, analyzed their causes, and made recommendations for improvements to the cognizant agency managers. In some cases, despite our efforts, issues previously identified have continued to pose problems for NSF. Recognizing that we play an advisory role and have limited control over how issues are ultimately resolved, we believe we can make our work achieve better results for NSF. The following performance measures and strategies describe the steps we will take to increase our impact on NSF effectiveness and efficiency.

#### How We Will Measure Progress

Performance will be measured through a series of performance indicators intended to ensure that we have more impact.

| Goal 1 Performance Measures   |                        |  |
|---|------------------------|--|
|   | Data Source(s)         |  |
| 1.1 OIG activities and products address substantive agency and federal issues.  | Survey and<br>Analysis |  |
| 1.2 Outreach successfully supports NSF efforts to inform its awardee community about the financial/compliance standards that matter for effectiveness and efficiency. | Survey and<br>Analysis |  |
| 1.3 Information is available to NSF management in time to address issues  | Survey and<br>Analysis |  |
| 1.4 Products are clear, concise and factual and convey realistic recommendations that will correct the problems identified  | Survey and Analysis    |  |

#### STRATEGIES AND ASSOCIATED ACTIONS

In order to achieve this goal, we plan to accomplish the following specific strategies and actions:

## 1. Identify and implement approaches to improve product quality and timeliness.

- Initiate a process to convert to electronic audit workpapers.
- Establish a team to develop standard audit report content and presentation formats for performance and grant audit reports.
- Develop and finalize a policy on audit reporting.
- Conduct a training session to provide guidance and examples of quality audit reports and quality Semiannual Report write-ups.
- Complete most OIG audits within one year of conducting the planning conference.
- Complete 75% of all audits carried over from prior year.
- Develop and finalize a policy on relying on the work of others.
- Develop and finalize a policy on A-133 audit desk review and oversight.
- Identify and monitor quarterly workload targets for each audit team.
- Discuss performance-based contracting with the Contracting Officer; present options on how to include performance-based language in our contracts.
- Contact and solicit bids from at least five new IPA firms.
- Solicit staff proposals for increased quality and timeliness of investigative product.
- Review OI operations for compliance with ECIE standards of performance.
- Ensure sufficiency of all investigative products.
- Review Investigations Manual and forms.

- Conversion to electronic workpapers.
- Percentage of audits completed by OIG or its contractors within one year of conducting the planning conference.
- Percentage completed of audits carried over from prior year.
- Development of audit report content and presentation formats.
- Issuance of an OIG audit reporting policy.
- Completion of quality audit report and semiannual report writing training.
- Issuance of an OIG audit policy on relying on the work of others.
- Issuance of an OIG audit policy on A-133 audit desk review and oversight.
- Identification of quarterly workload targets.
- Number of new IPA firms that we contact for audit work.
- Development of options for including performance-based language in our contracts.
- Number of proposals received from OI staff to improve quality and timeliness of investigative product.
- Completion of external investigations peer review.

- Number of investigative milestones, reports of investigation, and management implication reports completed and number of processes or procedures modified to ensure sufficiency of investigative product.
- Completion of Investigations Manual and forms update.

## 2. Strengthen our focus by refining approaches for selecting work and setting priorities.

- Develop and execute the annual audit plan;
- Document decision for final selection of audits included in the audit plan;
- Develop a risk analysis of NSF funding by program and Directorate.
- Identify and maintain focus on risk factors present in NSF programs and operations.
- Identify and maintain focus on high-risk institutions.

- Development and execution of the annual audit plan.
- Documentation of decision for the final selection of audits included in the plan.
- Completion of funding risk analysis.
- Number of staff identified risk factors in NSF programs and operations.
- Number of meetings between OI and OA to remain abreast of institutions identified as at-risk.

# Goal 2 Safeguard the Integrity of NSF Programs and Resources

- Enhance ability to detect and address improper, inappropriate, or illegal activities
- Balance reactive and proactive approaches in order to achieve maximum preventive effect

To maintain public confidence in government-funded research and education efforts, NSF and the education and research communities must show a high level of integrity in the expenditure of public funds and in the conduct of their efforts. These endeavors, moreover, cannot function effectively if researchers and educators cannot rely on their colleagues to produce and represent their results with integrity. When problems of integrity occur, they must be dealt with in a fair and responsible manner. OIG conducts activities to promote sensitivity to ethics in research and to help NSF reduce such abuses as falsification of data, plagiarism, fabrication of data, and misuse of government funds. The following performance measures and strategies describe the steps we will take to safeguard the integrity of NSF programs and resources.

#### How We Will Measure Progress

Performance for this goal will be measured through a series of performance indicators intended to assess how well we are safeguarding integrity of programs and resources.

| Goal 2 Performance Measures                              |                |
|--|----------------|
|  | Data Source(s) |
| 2.1 Integrity issues are addressed in a timely and       |                |
| appropriate manner.                                      | Survey and     |
|  | Analysis       |
| 2.2 Investigative outputs are clear, concise and factual |                |
| and convey analytical rigor and specific, realistic      | Survey and     |
| recommendations  | Analysis       |
| 2.3 Proactive activities successfully accomplish goals   |                |
| and enhance investigative efforts.                       | Survey and     |
|  | Analysis       |

#### STRATEGIES AND ASSOCIATED ACTIONS

In order to achieve this goal, we plan to accomplish the following specific strategies and actions:

#### 1. Detect and address improper, inappropriate, or illegal activities.

- *Improve our ability to detect falsified figures in NSF proposals.*
- Assess available software packages for enhanced financial analysis.
- Improve and accelerate the research misconduct investigative process.
- Implement a program to encrypt remotely stored or accessed sensitive information on OIG laptops and other data storage devices.

We will use the following measures for assessing progress in implementing this strategy:

- Testing of software options for the identification of falsified figures in NSF proposals.
- Identification of common accounting software to enhance review of financial data through a survey of the research community.
- Update research misconduct referral letter and provide sufficient guidance to ensure prompt and high-quality inquiries and investigations at institutions.
- Installation of encryption program on specified equipment.

#### 2. Strengthen OIG proactive activities.

- Assess efficacy of current approach for identification of cases and priorities.
- Enhance proactive review planning process.
- Broaden scope of proactive activities appropriate for programs and grantees within NSF OIG jurisdiction.

- Development of proactive review plan based upon identified investigative risk areas and staff assessment of high-risk programs and institutions
- Completion of focused proactive reviews and subsequent assessment of effectiveness.
- Communicate with federal OIGs overseeing similar programs, grantees, etc. to identify and share proactive practices employed.

# Goal 3 Utilize OIG Resources Effectively and Efficiently

- Continue to strengthen our management and planning tools and techniques
- Fully develop, plan for, and utilize OIG personnel
- Ensure that managers and staff have tools and resources necessary to accomplish their duties and responsibilities
- Promote effective internal and external communications

Our success depends on our ability to pull together as an organizational unit, make effective use of our limited resources, overcome internal divisions, develop an effective infrastructure for management, draw on resources external to our own organization, and focus our efforts on issues important to NSF. We have a diverse and talented workforce whose backgrounds and skills range beyond what one would find in a typical OIG. To effectively capitalize on our internal diversity, we must ensure a common understanding of office priorities, open communications both within our office and with outside organizations, and fully coordinated efforts to accomplish our goals. The following measures and strategies represent the steps we will take to address these issues.

#### How We Will Measure Progress

Performance for this goal will be measured through a series of performance indicators intended to assess how well we are safeguarding integrity of programs and resources.

| Goal 3 Performance Measures |   |                        |  |
|-----------------------------|---|------------------------|--|
|                             |   | Data Source(s)         |  |
|                             |   |                        |  |
| 3.1                         | Assessments to determine if we are effectively and efficiently utilizing OIG resources    | Survey and<br>Analysis |  |
| 3.2                         | Adequacy of management and planning tools and techniques                                  | Survey and<br>Analysis |  |
| 3.3                         | Effectiveness of personnel recruitment, retention, development, planning, and utilization | Survey and<br>Analysis |  |
| 3.4                         | Effectiveness of OIG internal communication   | Survey and<br>Analysis |  |

#### STRATEGIES AND ASSOCIATED ACTIONS

In order to achieve this goal, we plan to accomplish the following specific strategies and actions:

#### 1. Strengthen and utilize the professional expertise of all OIG staff.

- Conduct a bi-annual survey of OIG staff to obtain its views on the effectiveness of
  - OIG use of its resources in personnel, equipment, technology and contracting,
  - o Management planning, policies, and procedures,
  - o Internal communications and coordination.
  - o OIG impact on NSF, and
  - o KMS and other management tools.
- Analyze survey results and develop and implement corrective actions for any problems identified.
- Make system enhancements to KMS.
- Conduct KMS and other IT training, as necessary.
- Update KMS user manuals.
- Provide prompt, effective responses to requests for IT support.
- *Identify and replace outdated computer systems.*
- Implement an automated calling system for continuity of operations planning and testing.
- Conduct at least one new employee orientation each year.
- Develop and implement annual audit training plan.
- Develop position descriptions for OA attorney-advisors.
- Develop an employee exit survey form with instructions. Conduct exit surveys with all exiting staff to obtain feedback on any issues and areas for office improvement.
- Conduct all-hands meeting once a quarter. Audit staff will be invited to suggest agenda topics to their respective SAM or DAIGA.
- Provide basic FOIA / PA training to OIG staff.
- Conduct meetings of the Employee Survey Advisory Group and the AIGA on a quarterly or other mutually agreed upon schedule to discuss issues of continuing concern among audit staff.
- Incorporate instructional opportunities into investigator training requirements.
- Complete training identified in Individual Development Plans.
- Participate in inter-agency training.
- Maintain investigative training records and review investigative core competency requirements.

- Completion of survey of OIG staff.
- Development and implementation of corrective actions based on analysis of survey results.
- Completion of system enhancements to KMS.
- Provision of KMS and other IT training to OIG staff.
- Issuance of KMS user manual updates.

- Level of staff satisfaction with KMS and IT support, as reflected in employee survey.
- Replacement of specified computer systems.
- Acquisition of automated calling system.
- Completion of one new employee orientation session.
- Development and execution of the annual audit training plan.
- Development of position descriptions for OA attorney-advisors.
- Development of an employee exit survey form with instructions.
- Number of all-hands audit staff meetings.
- Number of meetings between the Employee Survey Advisory Group and AIGA.
- Number of opportunities for OI staff to serve as instructors.
- Percentage of training completed on Individual Development Plans.
- Number of interagency training events accomplished.
- Percent of training certificates entered in KMS and review of investigative core competency requirements.

#### 2. Improve communication and collaboration within OIG.

- Facilitate information exchange and referrals among the Audit, Investigation, and Administrative units.
- Share information about audit, investigative, and administrative activities at all-staff meetings.
- Strengthen Investigations/Audit/Administrative teams performing OIG/NSF liaison duties.
- Conduct periodic meetings between audit and investigation managers to discuss cross-cutting issues, mutual concerns, and cooperative efforts.
- Use office-wide committees for completion of various OIG projects and activities.
- Conduct periodic informational meetings for administrative staff from each OIG unit.
- Ensure staff participation in the development and implementation of the annual OIG Performance Plan.

- Number of information exchanges and brainstorming sessions among the audit, investigation, and administrative units.
- Number of referrals within OIG, as shown in KMS.
- Percentage of all-staff meetings at which auditors, investigators, and/or administrative staff give presentations about their activities.
- Percentage of OIG/NSF liaison teams composed of combined audit, investigative, and/or administrative personnel, and assessment of the effectiveness of such teams.
- Number of meetings between audit and investigation managers to discuss cross-cutting issues, mutual concerns, and cooperative efforts.
- Participation of staff from all OIG units in office-wide committees.
- Number of informational meetings conducted for administrative staff from each OIG unit.
- Extent of staff participation in the development and implementation of the annual OIG Performance Plan.

### 3. Ensure effective external communications and consultation with our stakeholders.

- Produce timely external reports on OIG results and issues.
- Provide testimony and other requested information to congressional committees.
- Provide briefings to the NSB, Congress, OMB, NSF, and others regarding OIG plans, priorities, and progress.
- Prepare timely OIG budget requests.
- Issue two OIG Newsletters by email.
- Revise statistical section of Semiannual Report to make it more useful.
- Update NSF leadership regularly on OIG activities and concern.
- Participate in committees and task forces, as appropriate.
- Collaborate with federal and international agencies to advance common audit, investigative, and management goals.
- Provide leadership and active participation in the IG community.
- Track and coordinate GAO audits of NSF programs.
- Develop guidance for the OIG/NSF liaison program.
- Conduct active outreach to NSF and the research community.
- Ensure that most liaison teams include representatives from more than one OIG unit.
- Track usage of OIG website.
- Ensure that FOIA/PA requests are processed in a timely manner.
- *Submit article(s) for publication in appropriate journals.*

- Percentage of semiannual reports to the Congress, annual OIG performance report, budget submissions, and other regular reports completed by prescribed target dates.
- Number of testimonies, responses to questions, and other information submissions provided at the request of congressional committees.
- Number of briefings provided to NSB members/committees, congressional staff or members, OMB staff, NSF staff, and others.
- Completion of budget requests in compliance with established deadlines.
- Number of OIG Newsletters issued.
- Development of new statistical section in Semiannual Report.
- Number of update meetings with the NSF Director and Deputy Director.
- Number of committees and task forces within the IG community on which OIG staff participated.
- Extent of participation with other federal and international agencies in joint training, collaborative projects, and the development of policies and procedures to advance common audit, investigative, and management goals.
- Leadership and participation roles on President's Council on Integrity and Efficiency/Executive Council on Integrity and Efficiency (PCIE/ECIE) committees and related activities.
- Number of GAO audits tracked and coordinated.
- Completion of a guide for the OIG/NSF liaison program.

- Number of outreach activities by OIG staff to NSF and the research community.
- Percentage of liaison teams that include staff from more than one OIG
- Number of hits on OIG website to indicate level of usage.
- Percentage of FOIA/PA milestones met.
- Submission of article(s) to appropriate journals.